**IN THE SPECIFICATION**

**[Page 1, Line 7]** (currently amended) THIS APPLICATION IS A CONTINUATION-IN-PART OF US ~~PAPTENT~~ PATENT APPLICATION ENTITLED "~~ACOUSTICE~~ ACOUSTIC MEASUREMENT METHOD AND APPARATUS" SER. NR. 10/396,541, FILED 2003, MARCH 25, BY, ROBERT HICKLING, THE PRESENT INVENTOR.

**[Page 3, Line 18]** (currently amended) The technical information contained in this patent application is hereby incorporated herein by reference. An AVP consists of a tetrahedral arrangement of four small microphones less than 6 mm in size that simultaneously measures ~~the three components of the sound intensity vector. Sound intensity is sound power flow per unit area.~~ at a point in air the three fundamental quantities of acoustics, namely the sound-intensity and sound-velocity vectors, and sound pressure. Sound intensity is the time average of sound power flow per unit area. The time dependence of sound intensity is determined by taking a series of averages over short intervals. AVPs are more accurate, more compact and less expensive than previous instruments for measuring sound intensity. Nested AVPs can be used to make accurate measurements over a broader frequency range than previous instruments. A calibration procedure described by Hickling (Ref.7) ensures the probe is accurate and omnidirectional.

**[Page 7, Line 23]** (currently amended) Assuming the source of pulsed sound 100 is about 1 m above the ground and that the speed of sound in air is about 345 m/s, the pulse takes about 3 ms to reach the ground. Signals from the array 200 are gated by the digital signal processor 400 so that neither the pulse nor its first reflection from the ground surface is acquired by the multi-channel data acquisition system 300. The sound pulse penetrates the ground and is reflected back by the buried object which typically might be about 0.05 m from the surface. The round-trip distance in the ground to the object and back to the surface is then about 0.1 m. Typically the speed of sound in the porous material of the ground can be about 250 m/s or less, so that the first part of the echo from the buried object reaches the array of AVPs more than 0.4 ms after the incident pulse reached the ground. At this point the multi-channel data acquisition system 300 has been switched on to receive the return signal. The next sound pulse from the source 100 does not occur until after the return signal has been received completely and analyzed by the processor. Care has to be taken to ensure that the incident pulse and its first reflection are not received at any of the AVPs in the array before the arrival of the return signal from beneath the surface of the ground. This limits the size of the array. For example if the source is about 1 m above the center of the array, the

largest dimension of the array cannot be much greater than about 1 m. In general the source of pulsed sound should be located above the center of the array and the greatest dimension of the array should be less than or comparable to the distance of the source above the ground. The sound pulse from the source incident on the ground can be strengthened by placing the source within an acoustic reflector as shown in Figure 2 where the acoustic reflector houses the pulsed sound source.